

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 7,357,792 B2  
APPLICATION NO. : 10/687515  
DATED : April 15, 2008  
INVENTOR(S) : Brian L. Newton et al.

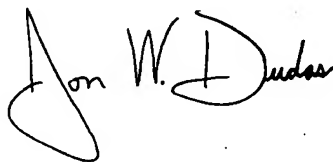
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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Please substitute old existing drawings with the new illustrating formal drawings  
Figures 1-7 that are attached with the title page drawing.

Signed and Sealed this

Thirtieth Day of December, 2008

A handwritten signature in black ink, reading "Jon W. Dudas". The signature is stylized, with a large, looped initial "J" and a cursive "Dudas".

JON W. DUDAS  
*Director of the United States Patent and Trademark Office*

(12) **United States Patent**  
**Newton et al.**

(10) Patent No.: **US 7,357,792 B2**  
 (45) Date of Patent: **Apr. 15, 2008**

(54) **POSITIVE PUSH MEDICAL VALVE WITH  
 INTERNAL SEAL**

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 (US); Andrew L. Cote, Sr., Merrimack,  
 NH (US)**

(73) Assignee: **Nypro Inc., Clinton, MA (US)**

(\*) Notice: Subject to any disclaimer, the term of this  
 patent is extended or adjusted under 35  
 U.S.C. 154(h) by 206 days.

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(21) Appl. No.: **10/687,515**

(22) Filed: **Oct. 16, 2003**

(65) **Prior Publication Data**

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**Related U.S. Application Data**

(60) Provisional application No. 60/422,074, filed on Oct.  
 29, 2002

(51) Int. Cl.  
**A61M 39/00 (2006.01)**

(52) U.S. Cl. **604/244; 604/247; 604/256**

(58) Field of Classification Search **604/99.04,  
 604/246, 207, 206, 205, 202, 244, 256, 200,  
 604/201, 247; 251/149, 149.1**

See application file for complete search history.

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*Primary Examiner*—Nicholas D. Lucchesi

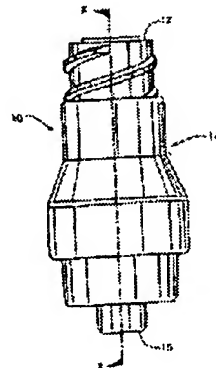
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(74) *Attorney, Agent, or Firm* **Bromberg & Sunstein LLP**

(57) **ABSTRACT**

A medical valve having an open mode to permit fluid flow and a closed mode to prevent fluid flow has a body and a valving element within the interior of the body. The body also has a valving element within its interior, and a proximal port and a distal port. The valving element controls fluid flow between the proximal and distal ports. Moreover, the valving element includes a resilient member and a plug. The resilient member forms a variable sized fluid chamber within the interior of the body, while the plug cooperates with the gland to provide an internal seal (within the interior of the body) that is spaced from the proximal port. The plug is capable of radially expanding the resilient member when the valve transitions from the closed mode to the open mode. The fluid chamber has a larger volume when in the open mode than when in the closed mode.

**19 Claims, 5 Drawing Sheets**

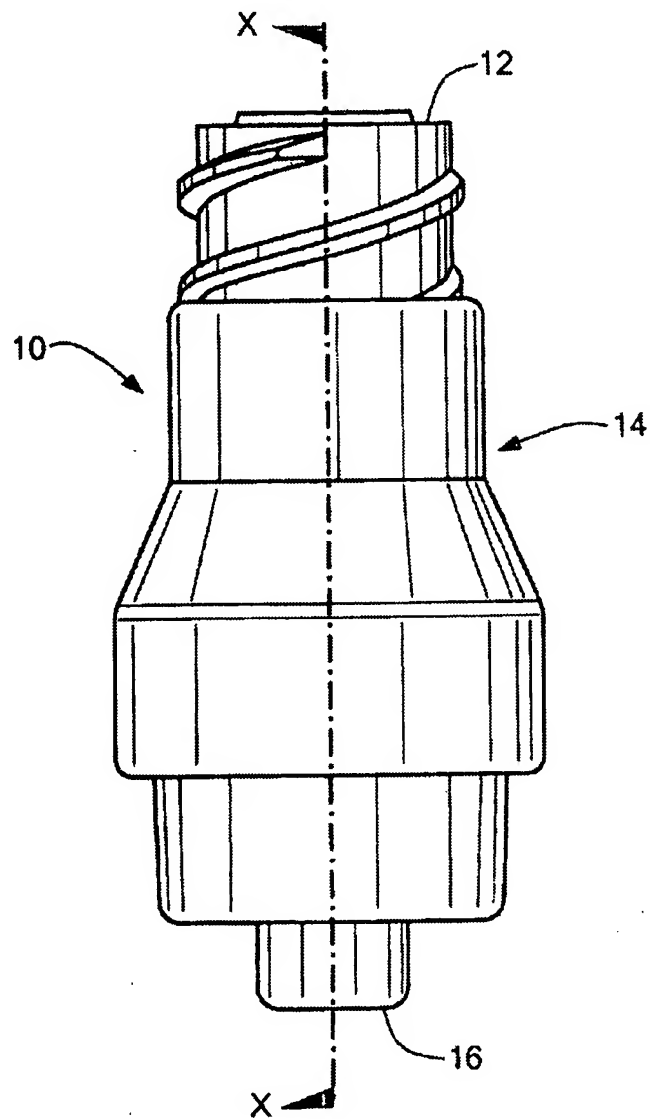


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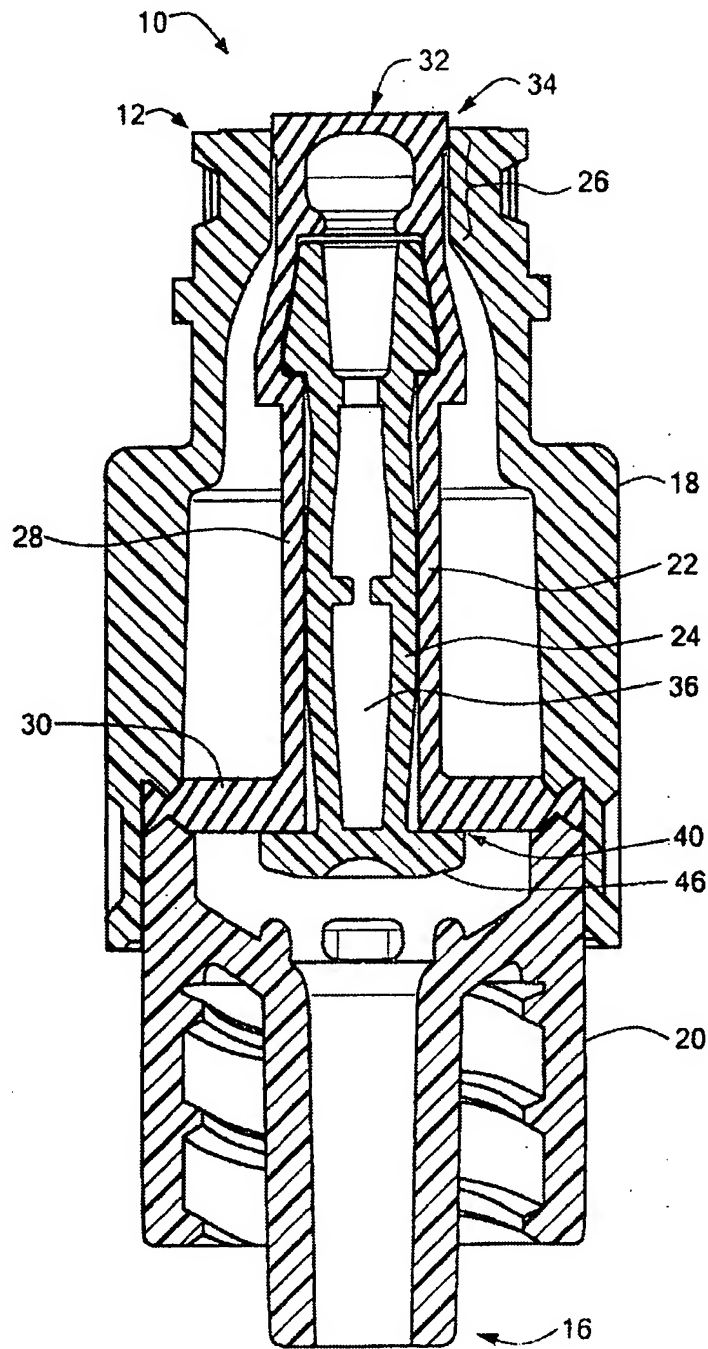
**FIG. 1**

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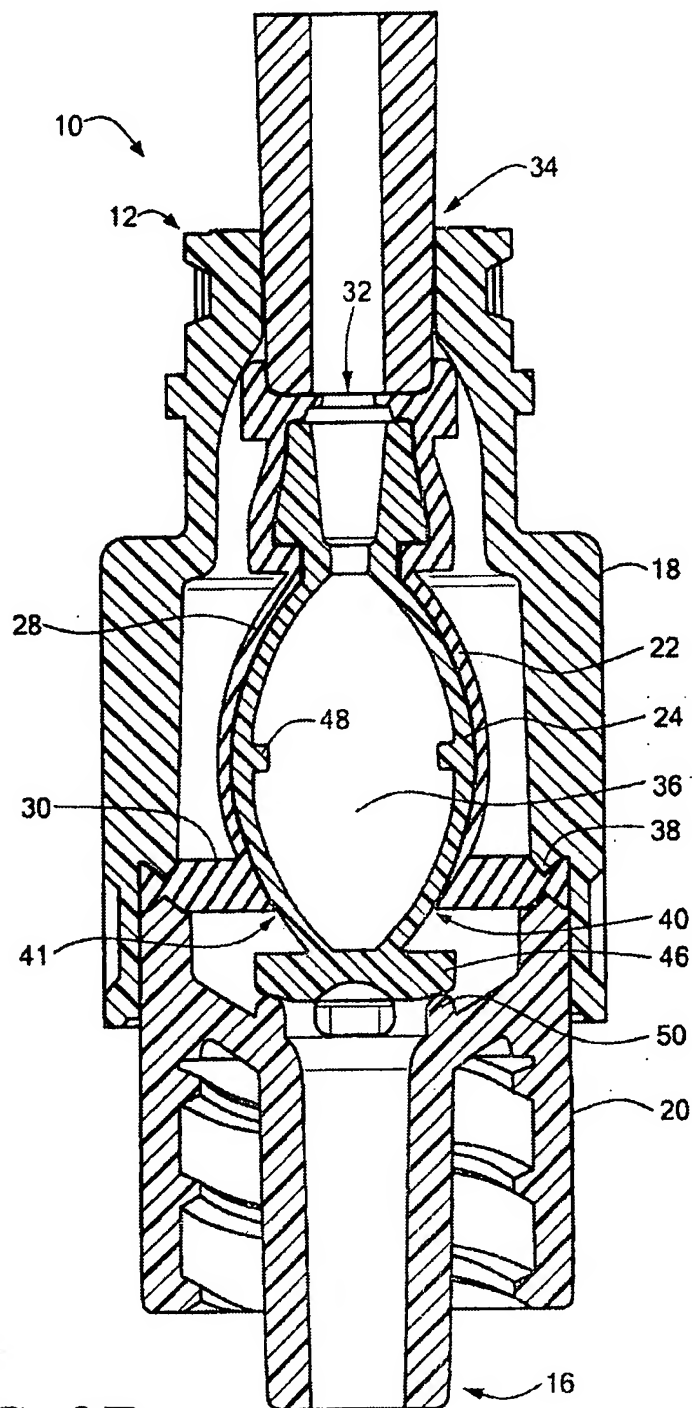
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**FIG. 2A**



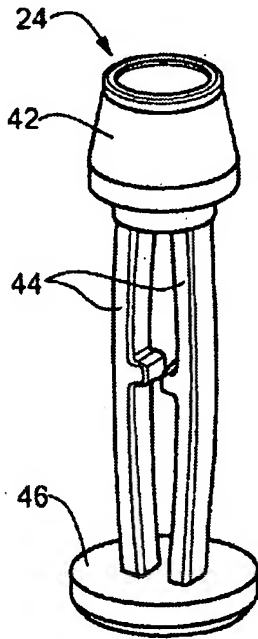
**FIG. 2B**

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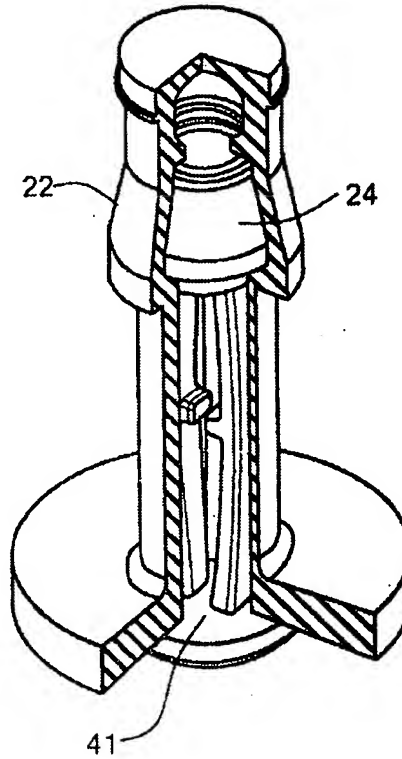
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**FIG. 3**



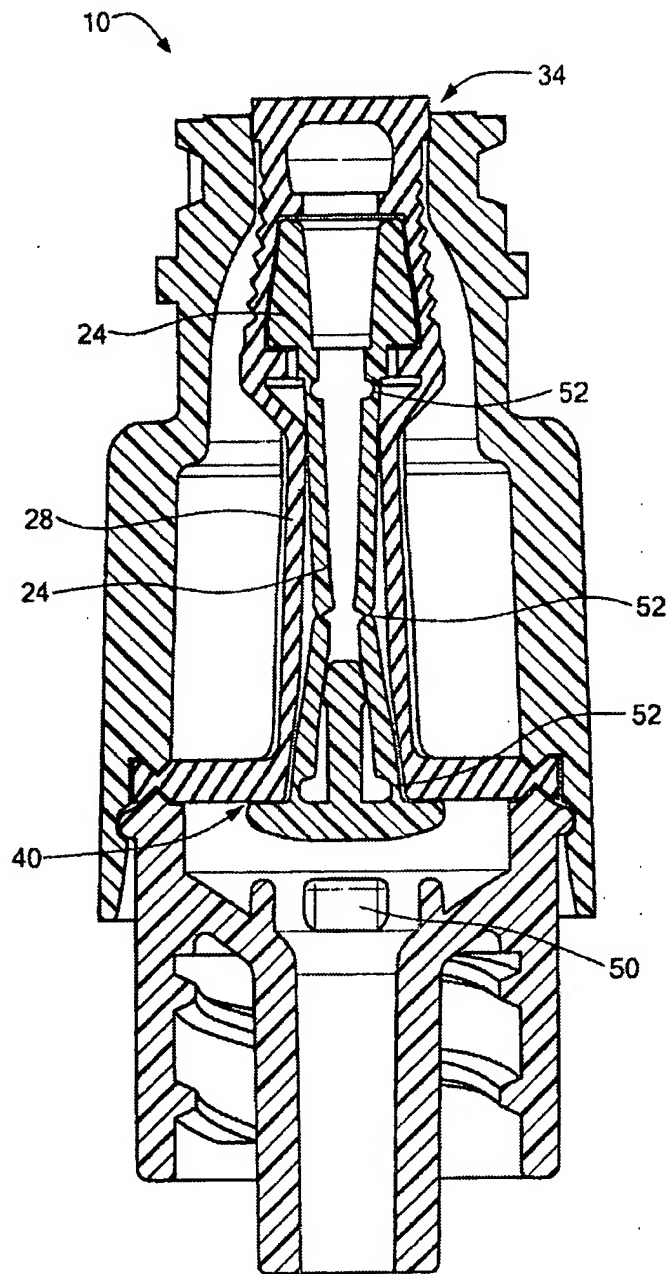
**FIG. 4**

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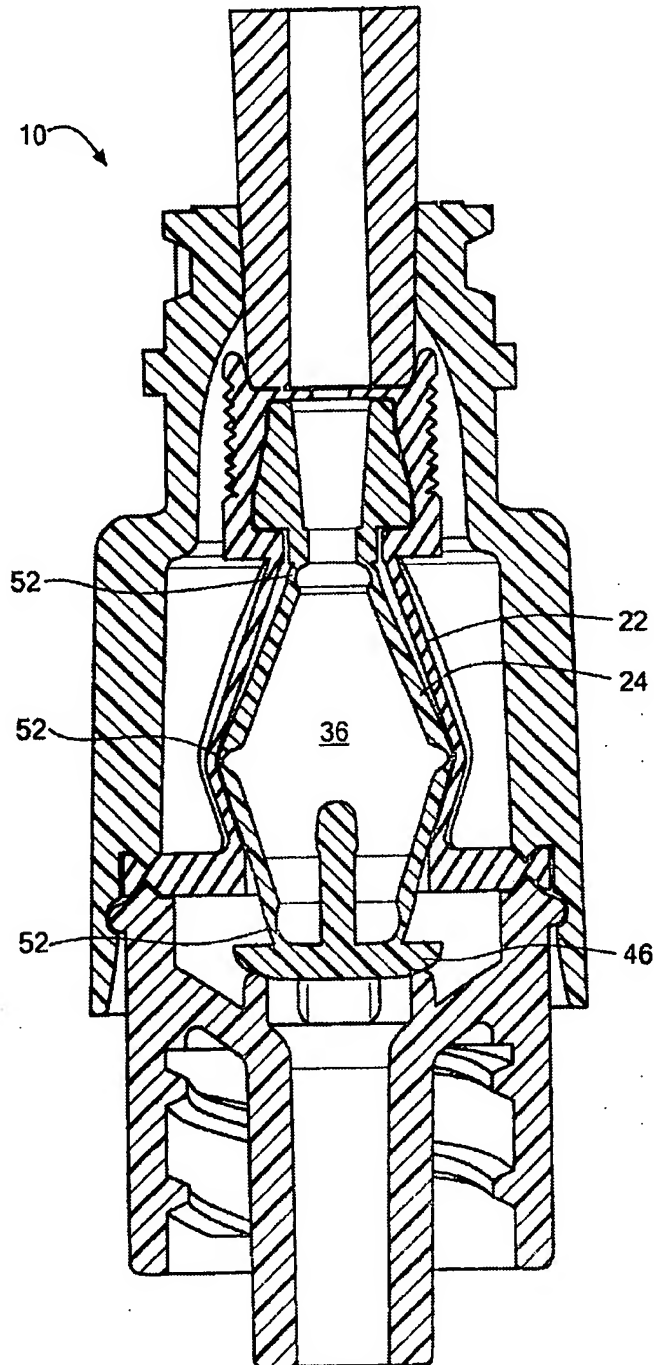
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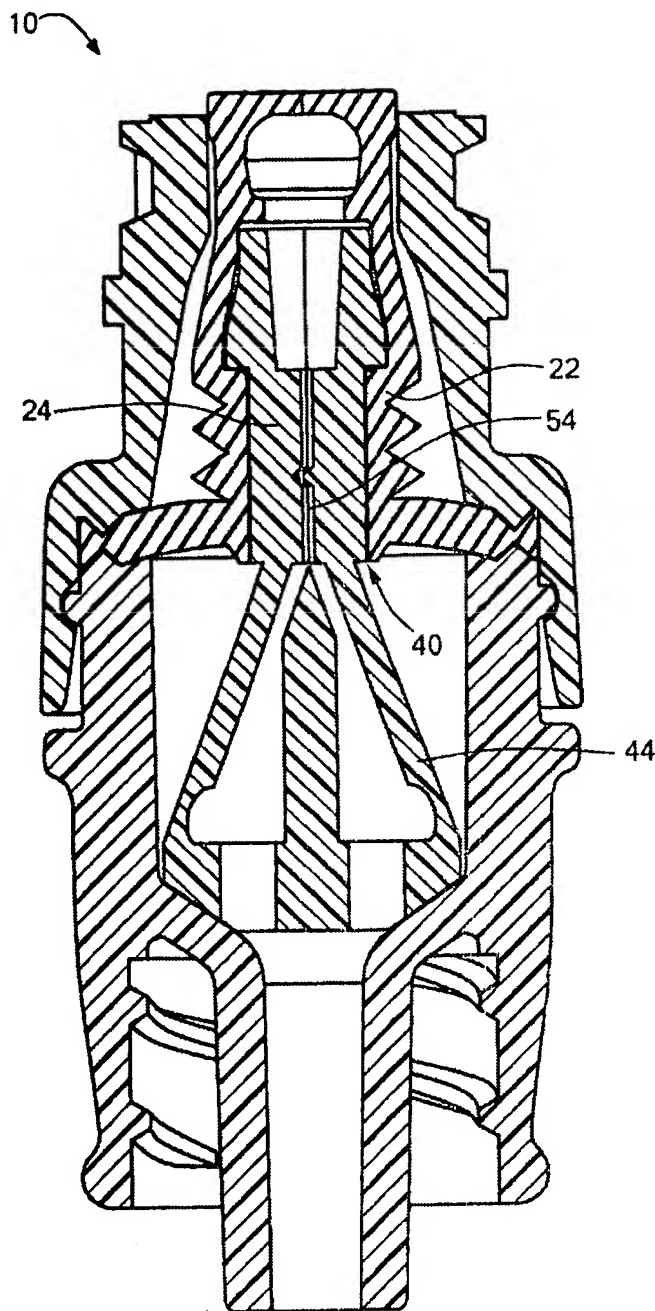


**FIG. 5A**



**FIG. 5B**





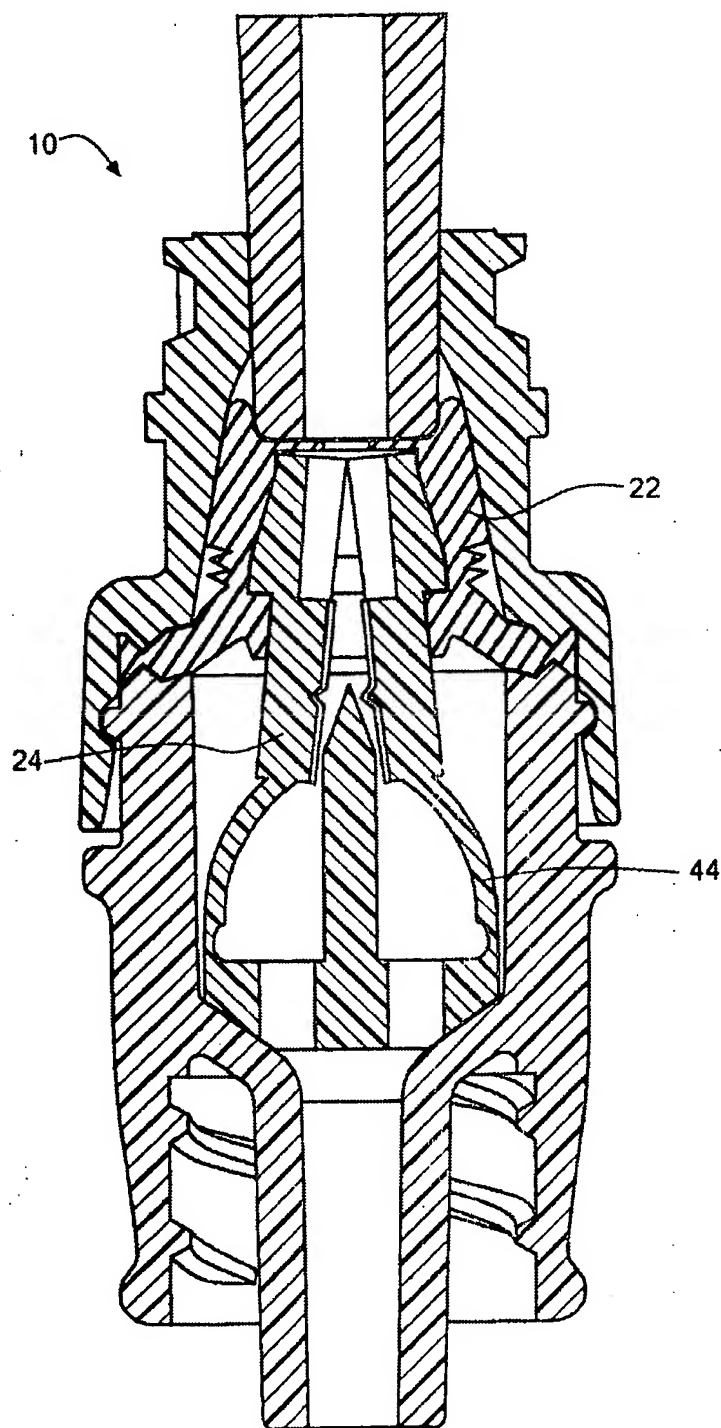
**FIG. 6A**

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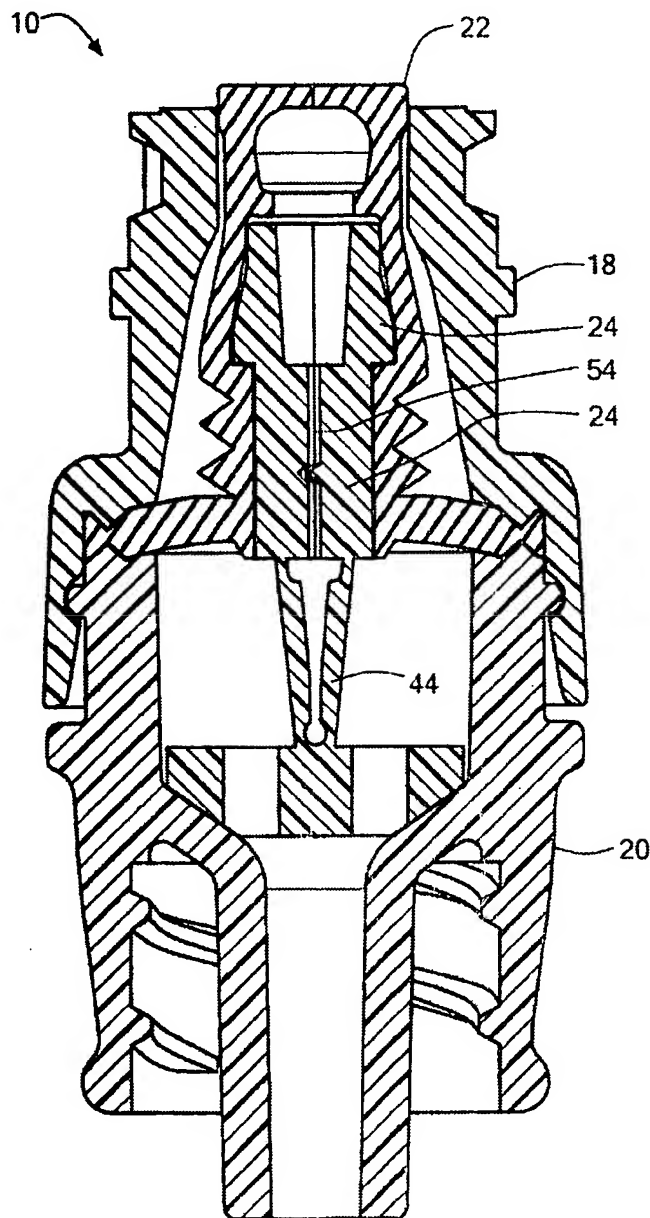
**FIG. 6B**

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**FIG. 7**